AQUATICA™

Digital

OPERATING MANUAL
FOR THE AQUATICA PRO DIGITAL HOUSING FOR THE NIKON D3/D3x/D3s

PRODUCT # 20067

FOREWORD

Thank you for having selected the AQUATICA Pro Digital Camera Housing System for your underwater photography.

This AQUATICA Pro Digital Housing is the result of a long and continuing relationship with the most demanding underwater photographers in the world. Each housing is handcrafted, quality checked and pressure tested to 300 feet by a small group of specially trained individuals, each of whom takes the utmost pride and satisfaction in offering the best underwater camera housing in the world.

The Aquatica D3s Pro Digital Housing is engineered for optimum technical and optical performances as well as providing easy and efficient underwater access to essantials functions and controls of the Nikon D3/D3x/D3s DSLR. this new housing is the replacement of our previously aclaimed D3/D3x housing and was redesigned to give better and faster access to the new features found on the D3s version, this was done while improving controls for the alternate versions of this camera model as well.

This manual assumes that the User is already familiar with the Nikon D3 series of cameras. If not, please read the Nikon instruction Manual before attempting to use the housing.

With basic care and maintenance, your AQUATICA housing will give you a lifetime of enjoyment and satisfaction in producing underwater images.

Please read this manual carefully before using your housing for the first time and note that: wherever cited the right hand is your right when using the housing.

SAFETY PRECAUTIONS

Improper transportation handling or use of this housing might cause a flood or malfunction.

Please read and follow the following precautions:

• Store and transport the housing in a sturdy, shock proof container and avoid travelling with the camera mounted inside the housing as impact forces especially on the external push buttons will be transferred to the camera.

• When travelling by air, either remove the port or open the housing.

• Never change a port or open the housing in a location where sand or similar foreign material might come in contact with an O-ring

• Use of accessories or modifications and alterations unauthorized by the manufacturer may result in flooding or poor functioning of the controls

• Be careful when opening the housing as the pressure buildup inside the housing will exaggerate the force of the latch spring. Keep fingers away from the path of the latches.

• Whenever changing ports or O-rings, perform a simple seal test with out the camera inside.

• Avoid scratching the acrylic or glass ports and windows.

• Make sure that all ports remain properly attached before rinsing the housing, especially when rinsing without a strobe make sure the Bulkhead connector is sealed with its plug.

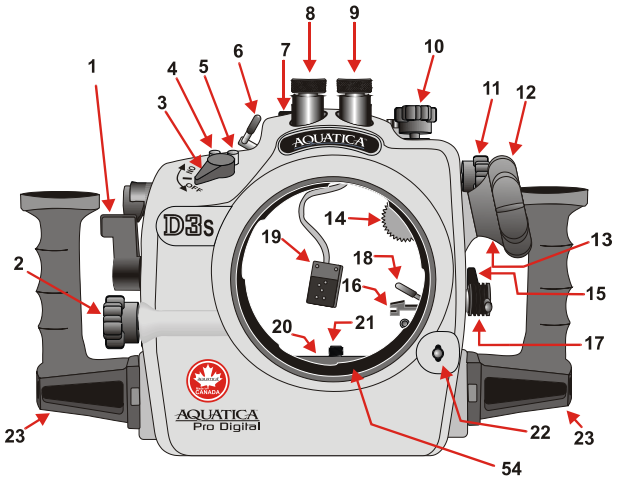
• Never attempt to operate the camera in autofocus mode with the lens mounted focus gear engaged with the housing gear.

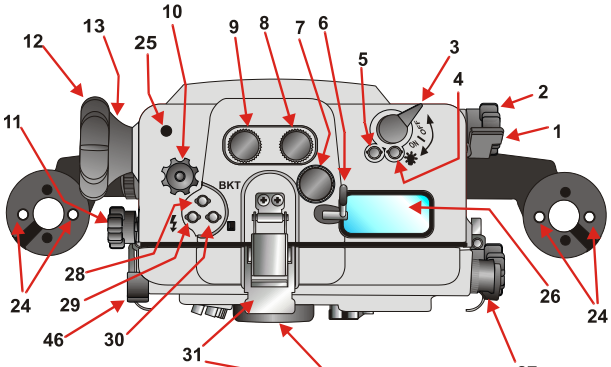
• The main O-ring seals should be maiained and cleaned on a regular basis. Read and follow the Care and maintenance instructions on this manual.

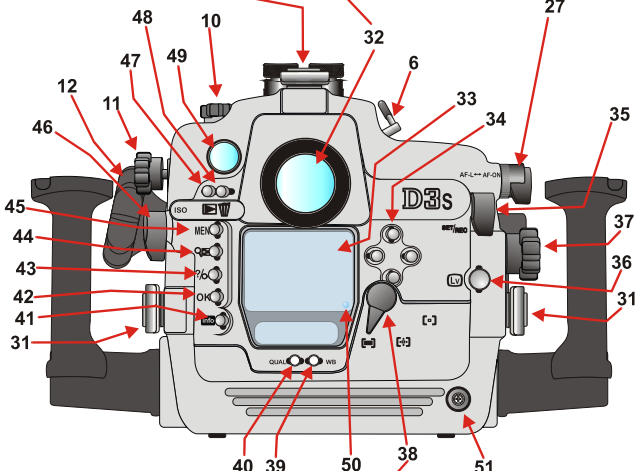
• Ensure that the spring loaded secondary lock is properly engaged to prevent the accidental opening of latches.

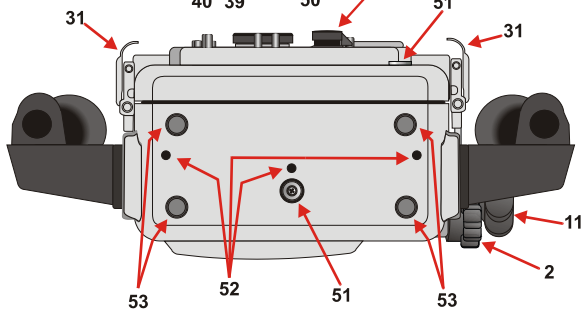
AQUATICA™
Pro Digital

D3s









1- Shutter Release lever
2- Sub-Command Dial knob
3- Power Switch/Illuminator lever
4- Exposure compensation button
5- Exposure Mode selector button
6- Metering Pattern Selector lever
7- Accessory Bulkhead port hole*
*(for Hydrophone or remote control)
8- Main Bulkhead Connector (TTL compliant)
9- Secondary Bulkhead Connector (manual only)
10- Release Mode Dial Lock Release knob
11- Release Mode Dial knob
12- Focus/Zoom Control knob
13- Focus/Zoom Control pinion gear release disc
14- Focus/Zoom Control pinion gear
15- Focus Mode Selector lever
16- Focus Mode Selector fork
17- Lens Release knob
18- Lens Release knob lever
19- Hot shoe connector
20- Removable tray
21- Camera attachment screw (1/4”-20)
22- Port Release mechanism button
23- Grips (2x)
24- Grip’s Accessories mounting holes (1/4”-20)
25- Accessory mounting hole (1/4”-20)
26- Top Control Panel port window
27- AE-L/AF-L & AF-ON selector lever & sleeve
28- BKT Bracketing button
29- Flash Mode Selector button
30- L Command Lock button
31- Latches (x3)
32- Interchangeable Viewfinder Eyepiece
33- Monitor Rear port window
34- Multi Selector array (Joy Pad)
35- Multi Selector set/Record lever
36- Live View Activating button (D3s only)
37- Main Command Dial knob
38- AF-Area Mode Selector knob
39- WB (White Balance) button
40- Qual (Image Quality/Size) button
41- Info activating button (D3s only)
42- OK button
43- Protect Button
44- Thumbnails/Playback Zoom button
45- Menu button
46- ISO (ISO Sensitivity) button
47- Delete button
48- Playback button
49- Release Mode Dial port window
50- Moisture Alarm LED
51- Sacrificial Anodes (x2)
52- Accessories mounting holes (x3)
53- Rubber Anti Skid pad
54- Bayonet Flange

AQUATICA Digital

01. SHUTTER RELEASE LEVER: Pulling the shutter release lever back part way activates the camera meter and autofocus. Pulling the lever back all the way fires the camera.

02. SUB-COMMAND INPUT / APERTURE KNOB: Rotates clockwise and counterclockwise. Use alone or in combination with other controls to select or set various camera functions or modes. In “Manual” the exposure mode controls the aperture settings (see camera manual).

03. POWER SWITCH / ILLUMINATOR KNOB: Rotate to switch camera on or off or to engage illuminator.

04. EXPOSURE COMPENSATION BUTTON: Press to engage the Exposure compensation control [+/-]. Rotate the Main-Command knob to set the desired exposure compensation value. The value will appear in the Top LCD panel and in the Viewfinder.

05. EXPOSURE MODE BUTTON: Press to engage the mode selector button, rotate the Main Command knob to the selected exposure mode. This button when pressed at the same time as the delete button (47) will format the card inside the camera.

06. METERING PATTERN SSELECTOR LEVER: Push and rotate clockwise or counter clockwise to select the metering mode, Spot, Center Weighted or Matrix metering options.

07. ACCESSORY BULKHEAD CONNECTOR: For additional strobe hydrophone or remote control connector.

08. MAIN BULKHEAD CONNECTOR: To connect Flash Sync Cord. (Manual Nikonos Type by default other option available on request).

09. SECONDARY BULKHEAD CONNECTOR: For Flash Sync Cord. (Manual Nikonos Type by default other option available on request).

10. RELEASE MODE DIAL RELEASE KNOB: Rotate and engage to press the locking button of the release mode

11. RELEASE MODE DIAL KNOB: Rotate to select the proper releasing mode, S, CL, CH, LV, self timer and mirror up.

12. FOCUS/ZOOM KNOB: Turning allows manual focus of a single focus lens or rotation of the zoom mechanism of a lens.

13. FOCUS/ZOOM PINION GEAR RELEASE DISC: Pull up and rotate to disengage the internal pinion gear when extracting the camera with a lens attached

14. FOCUS/ZOOM PINION GEAR: Engages and operates the focus or zoom gear attached to the lens.

15. FOCUS MODE SELECTOR: Rotate to select between manual, single or continuous focusing.

16. FOCUS MODE SELECTOR FORK: Engages the focus mode selector of the camera, rotate to alternate between focus type (M, S, C)

17. LENS RELEASE KNOB: activates the lens release button on the camera allowing easy removal of the lens.

18. LENS RELEASE KNOB LEVER: Applies pressure on the camera lens lock button

19. HOT SHOE CONNECTOR: connects the camera to the Flash Bulkhead. Slide this Connector into the camera Hot Shoe. When detaching do not pull the cord as this might damage the electrical connections.

20. REMOVABLE CAMERA TRAY: designed to slide the camera in and out, provided with a securing lock mechanism

21. CAMERA ATTACHMENT SCREW: ¼”-20 threaded screw to attach camera to tray.

22. PORT RELEASE MECHANISM: push to disengage the port lock, rotate port clockwise to install, counter clock wise to remove

23. HAND GRIPS (X2): Left and right grip allowing the mounting of strobe arms and accessories.

24. GRIP’S ACCESSORIES MOUNTING HOLES: Two 1/4-20 TPI holes on each grips are ready to accept TLC Base Brackets or TLC Base Ball for strobe arms or accessories.

25. MOUNTING HOLE FOR ACCESSORY: a 1/4”-20 TPI hole is supplied to accept a TLC accessory or TLC base ball for mounting a strobe arm or a modeling light.

26. TOP LCD WINDOW: displays essential camera operating data.

27. AE-L / AF-L & AF-ON LEVER: Rotate the collar to select AE-L/AF-L (inward) or AF-ON (outward) button this will lock the autofocus and/or auto exposure or activate the AF according to your preferences. (Please note that these buttons can also be assigned to other functions via the CSM menu of camera).

28. BRACKETTING BUTTON: Press to engage the bracketing function an rotate main or sub command dial to get the required setting.

29. FLASH MODE SELECTOR BUTTON: Push to activate the flash mode selector function, rotate main command knob to desired flash mode.

30. L COMMAND LOCK BUTTON: Push to activate the locking function, rotate main or sub command knob to lock aperture or speed.

31. LATCHES: Three heavy duty latches with safety locks to protect against accidental opening.

32. REMOVABLE VIEWFINDER: A full view of the illuminated camera viewfinder displays all necessary information. Can be removed and replaced with optional Aqua View Finder for a larger image

33. MONITOR DISPLAY WINDOW: allow viewing of menus, information and images

34. MULTI SELECTOR BUTTONS: These buttons have multiple uses. They allow the selection of the focus area, in the menu mode, they are used to scroll up or down and left to right to choose from your menu selection and they are used in the delete mode.

35. MULTI SELECTOR SET/RECORD LEVER: This lever presses on the center button of the multi selector array, in the case of the D3s it activates recording.

36. LIVE VIEW ACTIVATING BUTTON: (D3s only) pressing this button activates the Live View features and gets the camera ready for the video recording. (For Live View on other model you need to go through the Release mode selector (Key # 10 & 11) to activate Live View.

37. MAIN-COMMAND INPUT KNOB: It rotates clockwise and counterclockwise. It can be used alone or in combination with other controls to select or set various camera functions or modes. Refer to camera manual for in depth use.

38. AUTOFOCUS MODE SELECTOR KNOB: It rotates clockwise and counterclockwise. Use it to select the various autofocus pattern available. Refer to camera manual for in depth use.

39. (WB) WHITE BALANCE: Press to access white balance functions, use in conjunction with subcommand dial control (# 34).

40. (QUAL) IMAGE QUALITY SELECTOR CONTROL: Press to access the different image quality available on the camera; use in conjunction with main and/or sub command dial control knobs.

41. (Info) INFO ACTIVATING BUTTON: (D3s only), pushing this button displays shooting information on the rear LCD monitor.

42. OK BUTTON: Press to acknowledge selected function.

43. PROTECT BUTTON: Press to protect selected image from accidental deletion.

44. THUMBNAIL/PLAYBACK BUTTON: Press to display images in “contact sheets” of 4 or 9 images or for zooming in.

45. MENU BUTTON: Press to activate menu display, scroll using multiple selector buttons and select using enter button.

46. ISO CONTROL BUTTON LEVER: Press down to select ISO, use in conjunction with subcommand dial control (# 37) to select the desired ISO value.

47. DELETE BUTTON: Press to delete images, use multiple selector buttons to select and press the enter button to delete. Can also be uses in conjunction with mode selector button (Key #5) when formatting the memory cards.

48. PLAYBACK BUTTON: Press to activate the monitor and review images.

49. RELEASE MODE DIAL PORT WINDOW: Enables viewing of the different release options

50. MOISTURE ALARM WARNING DIODE: Warning LED will light up in the unlikely event of water penetrating the housing.

51. SACRIFICIAL ANODES: (2X) zinc anodes are installed to protect your housing against salt water corrosion; theses are made to deteriorate easier than the other strategic part of your housing, hence the name sacrificial anodes. These anodes need to be replaced by the user as needed.

52. MOUNTING HOLES: Three 1/4” X 20 holes are provided for mounting strobes trays or accessories.

53. RUBBER ANTI SKID PADS: Four rubber pads are provided to protect the housing and preventing it from sliding on wet decks.

54. BAYONNET MOUNTING FLANGE: allows the mounting of different ports and extension rings on the housing.

FEATURES

The *Aquatica Pro Digital* housing serie is issued from the world's most technologically advanced underwater housing lineage, ergonomically designed to place all the essential camera controls under your finger tips and features the following:

A. A port locking mechanism to prevent accidental rotation of the port or extension mounted on the housing

B. A Lens Lock Release control that will activate the lens release button of camera from the outside of the housing.

C. A quick release tray, allowing fast and easy removal of camera.

D. Large ergonomic and easy to operate controls for most of the manual and computerized camera functions.

E. The following controls can be easily manipulated underwater:
- Mechanical shutter release.
- Main-Command Dial
- Aperture through the Sub-Cmd Dial
- Focus / Zoom
- LCD panel illumination.
- Top LCD windows
- Metering system selector
- Auto Bracketing (BKT)
- Exposure mode (Mode)
-.Exposure Compensation
- Focus Area Selector
- ISO sensitivity
- Delete button access
- Live view access

F. A complete selection of bayonet mounted dome ports of 4", 6", 8" and 9.25 of diameter, three flat ports, a wide range of extension rings to preserve the image quality of your Nikon Mount AF lenses.

G. A complete line of lens gears including Auto/Manual focus selector gears and related accessories.

PREPARATION OF THE HOUSING

1. Attach Grip Bracket to the housing:
The housing comes with two Grips for both right and left hand grips which should be installed on each sides of the housing with the supplied screws and Allen key. Occasionally remove the grips and lubricate the screws (see Care and Maintenance: of the housing.)

Depending on which strobe system you are using, you can mount the necessary shoes or brackets onto the 1/4"-20 threaded holes on the top of the hand grips. The AQUATICA TLC strobe arm system is recommended.

There are also three (2) 1/4"-20 threaded holes on the bottom of the housing that can be used for various mounting application trays. As well there is another hole on front half of the housing for mounting accessories.

Mount your strobe and connect the sync cord to the housing's strobe bulkhead. Be sure to read the section titled "Care and Maintenance: of the O-rings."

2. Lubricate the Main O-ring Seal:
Before use, remove the Main O-ring seal from its groove on the front half of the housing and carefully verify that the O-ring and the O-ring groove are free from scratches or foreign material. Lubricate the O-ring with a light coat of silicone grease.

When replacing the O-ring place the entire O-ring over the O-ring groove and start by pushing the Oring in the corners. Work your way around the O-ring making sure the O-ring is snugly sitting in the groove.

For proper handling and maintenance of O-rings be sure to read the section titled "*Care and Maintenance: of the O-rings.*"

PREPARATION OF THE PORTS

1. Select the correct port:

Depending on whether you've decided to shoot macro or wide angle photography, you will be installing either a flat Macro Port (product # 18426, 18428 or 18429), or a Dome Port (Product # 18405, 18407,18409 or 18410).
See lens chart for the suggest port and accessories.

Macro Port Extension Rings: the Macro Ports will accept the AF & AF-S Micro-Nikkor 60mm lens without extension. If you intend to use a longer lens you will require an additional extension ring. These extension rings fit between the Macro Port and the housing to provide the extra space necessary for the longer lens.

Dome Port Extension Rings: When using a wide angle or zoom lens, the Dome Port may require the uses of an extension ring to closely match the optical center of both the dome and the lens.

In order to reduce glare, maximize contrast and offer physical protection to the dome, the use of a dome shade is highly recommended.
See lens chart for the suggested dome shade.

A comprehensive list of the lenses supported and their required extensions and/or accessories is supplied along with this manual.
For the latest uptdated version of this lens chart, you can refer to the Lens Chart on www.aquatica.ca

2. Clean the port:

Dirt, grease or fingerprints on the port especially on the inside, can adversely affect the quality of the image. Acrylic ports should be cleaned with plastic cleaner and the glass ports should be cleaned with lens cleaner. For more details be sure to read the section titled "*Care and Maintenance: of the Ports.*"

3. Lubricate the port O-ring seal:

Before using the port, remove the O-ring on the rear of the port and lightly coat it with silicone grease. For more details be sure to read the section titled "*Care and Maintenance: of the O-rings.*"

PREPARATION OF THE LENS

Depending on the lens used, there are a number of gear options possible. Using the right gear (s) and correctly mounting them on the lens is very important for a smooth housing operation. Follow the installation directions included with each gears carefully. Since the aperture control is achieved through the Sub-Command Dial, the use of AF types lenses is mandatory.

A comprehensive list of the lenses supported and their required gears is supplied along with this manual. For the latest uptdated version of this lens chart, you can refer to the Lens Chart on www.aquatica.ca

Notes: If the camera is set in manual focus a focus gear must be mounted on the lens. If you are using a zoom lens with a zoom ring the camera must be on auto focus, also note that if using a dome port you may need to install a closeup diopter on the lens to correct the minimum focusing distance of the lens so that it will be able to focus on the virtual image created by the dome.
See lens chart for the suggested diopter, if required for your lens/port combination.

Gear installation:

Mount the focus gear over the focus ring of the lens.
(a) For Slip-on gears (gears without mounting screws): Slide the gear over the lens and align the gear with the front of the lens focusing ring.

(b) For gears with mounting screws:Tighten the three set screws evenly. Tighten each screw approximately ½ a turn working around the gear until all the three (3) screws are tightened, and the gear is concentric with the lens body.

CAUTION: Do not over-tighten these screws, as this might bind the lens, thus restricting the rotation of the focus ring and/or damaging the lens. Conversely under-tightening these screws might cause the gear to slip or loose alignment.

Rotate the focus ring several times to make sure it moves smoothly and the gear does not slip before closing the housing

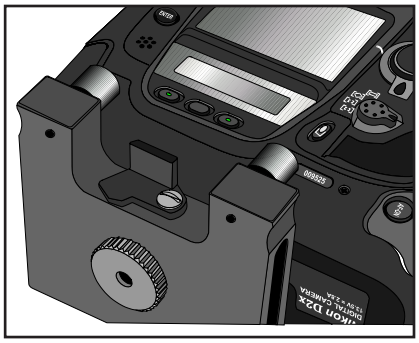
WARNING: If the lens is a not of the AF-S type, never attempt to operate it with the camera in autofocus mode and with a mounted focus gear engaged. This might cause serious damage to your camera or to the lens. With standard AF lenses switch from manual to auto focus by lifting the focus knob and the underlaying ring (key # 13) rotate and position it so as to disengage the focus gear mechanism, then switch the the MSC lever (key # 16) to the desired S or C position.

Zoom lenses: When using a zoom lens, the gear should be mounted on the zoom lens control. The housing focus control thens becomes the zoom control. Focusing of lens is achieved by using the camera's autofocus system.

1. Set the Focus Mode Selector to the M position on both the housing and the camera and pull the zoom/focus knob release disc (Key # 13) to lift free the internal pinion gear .

2. ***Important Note:*** prior to installing the camera in the housing, remove the camera strap, “D” Clips and/or any object that might obstruct installation or get in the way of that attach the strap should be removed or tucked away

3. Make sure the ON / OFF /ILLUMINATOR knob (key # 3) is in the ON position and that the lens lock lever (key # 17) is in the proper UP position



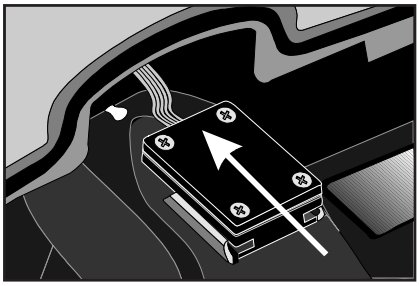
4. Remove the saddle from the housing and carefully place the camera on it and ensure the camera is properly installed and aligned as follows:

   a) The camera is properly aligned and secured against rotation or movement.

   b) Align the Tripod Socket of the camera with the mounting screw. Tighten the mounting screw securely while ensuring that the camera position is not altered. set arresting block as per drawing at right.

   c) Pull Release Mode Dial Knob (key # 10) and the Metering Pattern Selector Lever (key # 6) outward

   d) Ensure that the Release Mode Dial Release knob (key # 11) is in the up and suspended
   position, to do so, lift and rotate the knob so as to sit it on the provided raising pin.



   e) Slide the quick release tray (key # 20) back into place as per drawing at right.

CLOSING OF THE HOUSING

Once the camera is secure on the saddle inside the front half of the housing, simply:

1. Slide the housing’s hot shoe connector onto the hot shoe base of the camera, as seen in drawing at right.

2. Push the Lens release knob assembly back and in the right position.

Before closing the housing always ensure that:

1. The main O-ring on the front half of the housing is clean,lubricated and properly seated for a positive seal.

2. The sealing surface on the rear half of the housing is clean and free from any scratches or physical damage.

3. All cords or wires are tucked in so that they do not interfere with the closing of the housing.

4. The AF area mode selector lever is in the same position on both the camera and the housing (key # 38) . The actual AF mode is not important, but it’s position must be matched on both the camera and housing for the internal fork to properly connect to the camera AF area mode selector

To close the housing simply:

i. Join the front and rear halves of the housing using the two dowel pins at the bottom of the housing as a guide.

ii. Hold the housing with both hands and look around the sealing surface to ensure that the O-ring remained properly seated and that no cords, wires or “D-rings” are caught between the edges.

iii. First close the two sides latches simultaneously, then the top one. reverse the process to open housing

CAUTION: if you feel any resistance as you attempt to close the latches, do not force the closure. Check for an obstruction and try again.

iv. Verify that the safety locking mechanisms of the latches are properly engaged to avoid any accidental opening.

With the camera inside the housing, install the lens prepared with the gears through the port opening in the front of the housing. Ensure that the lens mounted gears are properly installed and aligned. Rotate the focus / zoom control knob to ensure that the gears are properly meshed, do not grind and that their rotation is smooth.

Note: To avoid damaging the auto-focus mechanism of the camera when using standard AF type lenses, you should always set the Focus Control to “M” Manual for testing the proper meshing of a focusing gears. this procedure is not required with AF-S type lenses.

CHANGING A LENS (REMOVING A LENS)

Two differents methods can be used for removing/replacing a lens.

The lens mounted gears may restrict the view and ease of access to the lens release button on the camera body. The AQUATICA D3s Pro Digital Housing features a Lens Release Lever (key # 17) that is designed to access the lens release button of camera to allow easy removal of lens.

To remove a lens, remove the port, simply rotate Lens Release Lever (key # 17) to press the camera body lens release, hold and turn the lens to remove.

Or pull out the lens release lever (key # 17), and Focus / Zoom knob assembly (key # 12) out of the way by rotating the disk (key # 13), open the back cover, remove the hot shoe from the camera and pull out the complete camera with its lens, replace the lens and reinstall.

MOUNTING THE PORT

Before mounting the Port on the Housing always ensure that the port O-ring is clean, lubricated and properly seated in its groove and that he sealing surface on the Housing is clean and free of physical damage.

The *AQUATICA Pro Digital* Housing System features a locking bayonet mount. To mount the port or extension ring simply:

1. Place the housing on its back on a soft steady surface.

2. Place the port or extension ring inside the main port of the housing. Align one of the four alignment notches with the opening of the housing.

3. Place your hands on opposite sides of the port or extension ring.

4. Push with even force on both sides of the port or extension ring until you feel it snap into place. Make sure the bayonet is completely inside the housing.

5. Finally press the port lock button down, turn the Port clockwise until it stops and then release the port lock button. Do not force it. If there is too much resistance take the port off, check the O-ring and retry.

6. Check to ensure for the proper seating and sealing of the port or extension and that it is safely locked on the housing.

Note : It is recommended that you familiarize yourself with this mount by trying it without the camera, this will allow you to see the inside view of the bayonet mount and of the ports or extension rings in the housing.

Depending on which strobe system you are using, you can mount the necessary shoes or brackets or Base Ball onto the threaded holes on the top of the hand grips. Use of the Aquatica TLC Strobe Arm System is recommended.

There are also two 1/4”-20 threaded holes on the bottom of the housing that can be used for various mounting applications. For example, Aquatica TLC makes a strobe arm mounting tray that will fit on the bottom of the housing. A 1/4”-20 threaded hole on top of the front half of the housing will accept an Aquatica bracket or Base Ball that can hold a small dive light or a strobe arm.

Internal switch board circuit:

Your Aquatica D3s Pro Digital housing is supplied with either one or two Nikonos type connectors which are in turn connected to a switch board circuit that will allow you to choose between full manual exposure or iTTL (an external converter or single housed flash is required). Optional Ikelite bulkheads connectors are also available.

Your Nikon Digital camera design does not allow two flashes to be electrically connected directly to the camera, whether in a housing or on dry land, this is due to the wireless approach used by them for triggering the additional flashes, when two flashes or strobes are connected directly to the camera, iTTL will stop to function and a camera freeze is likely to happen.

On your housing you will find one or two bulkhead connectors, the main connector is wired through a switch board that will allow you to take full advantage of iTTL exposure, the secondary (if installed) connector is always in full manual configuration and cannot be used for iTTL operation. By default your housing is delivered with the switch board set to full manual, if the iTTL exposure is desired then it can be made in either of two methods:

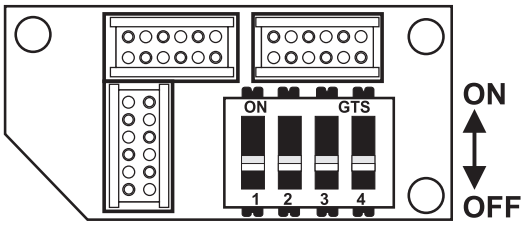
1) By using a single flash from Nikon or other brand (that is iTTL compatible with your camera) in a underwater housing connected with a TTL cord to the main connector of your Aquatica housing.

2) By using an external iTTL converter connected to the main connector of your Aquatica housing, one or two underwater strobes with TTL cords which are then connected to this converter, (check strobe and converter manufacturer for compatibility).

Set up instruction for iTTL operation: Using the tip of a pen push the switches 1, 2 & 3 to the ON (up) position, this will activate the connections on your main bulkhead connector allowing TTL communication between the camera and the housed flash or iTTL converter.

Set up instruction for manual operation: All switches must be in the OFF (lower) position, in this case all iTTL connection are disabled and only the ground and sync are left active, this will allow two under water strobes or housed flashes to be connected directly via the main and secondary bulkhead.

IMPORTANT NOTICE: When preparing the sync cord be sure to lubricate the O-ring on the sync cord’s connector with a light coat of Aquatica O-ring lubricant, Also advisable is to put a light coat of O-ring lubricant on the threads of this connector.



Following are the basic techniques. For more information and advanced photography please study the Nikon D3 instruction manual.

1. Push the Mode dial button (key # 22) and select the desired exposure mode with the main sub command dial control, the chosen mode will appears on both the Viewfinder (key# 30) and Top LCD window (key # 5). Exposure Mode options in sequence are: Programmed Auto (P), Shutter Priority Auto (S), Aperture Priority Auto (A) or Manual Exposure (M).

2. Control of Auto Exposure compensation (key# 21) is achieved by pushing down the button to engage compensation function, select proper parameter by using either the sub or main command knobs.

   Note: When using a flash, it is recommended that the camera be used only in Single Frame Motor Drive or there is the possibility that the camera will fire before the flash can recycle.

3. Push the Metering System Knob (key# 4) and select the metering system symbol you wish to use: 3D Matrix, Center-Weighted or Spot, in the LCD panel.

4. Pull the Shutter Release Lever partially back. This will activate the camera's meter and autofocus system.

5. If using manual focus use the Focus Knob (key # 11) on the housing or on the flat port to focus.

6. If using the Manual or Shutter mode adjust the Main Command Knob (key # 34) or sub-command (key # 2) to set the shutter speed.

7. Pull the Shutter Release Lever (key # 1) the rest of the way until the camera fires.

NOTE: FOLLOWING ARE A FEW TIPS THAT CAN PROVE HELPFUL IN UNDERWATER PHOTOGRAPHY SITUATION.

The command and sub command rotation can be inverted, refer to the "CSM" section of your menu, select " f Controls", select (f 7) customize command dial", select "Reverse rotation", select On and confirm by selecting OK. This will reverse the rotation of the dials and will give a more natural feel to the controls (typically the Nikon camera requires that you rotate the dial with your finger going from left to right, the mechanical linkage of the housing inverts this sequence on the external knob, reversing the rotation of the camera dial will make the housing more intuitive to use by giving it the same rotation dynamic as the camera has.

In the CSM menus of the D3 series of camera is a noteworthy function, it modifies the way buttons react, in normal situation you would be required to depress a button and rotate a dial with the other hand, as much as every effort is made to make the housing ergonomic, the reality is that housing are large and awkward when strobe are attach to them, making simple task such as selecting a shooting mode, white balance, image quality setting and ISO and exposure correction fairly hard to be made with letting go of the grips. Selecting f8, then yes will change the behavior of the button, no longer requiring them to be pressed down during the procedure.

The command and sub command function can be inverted, refer to the "CSM" section of your menu, select " f Controls", select (f 7) customize command dial", select "change Main/Sub", select On and confirm by selecting OK. This allows the aperture to be selected by the command knob in the rear and the shutter speed by the front sub command knob, allowing the users to conveniently position vital controls at their fingertip.

Lastly, the AF-L / AE-L button of the D3 series of camera can be deeply modified through the CSM function (f 6), one interesting option is the flash off function that will allow for a quick reaction time if you need to go to ambient light photography.

FOCUSING MODE

NOTE : Select the proper focus mode M / S / C with the focus mode selector (key # 15) on the housing. For more detailed information concerning the operation of the different focus modes consult the Nikon instruction book for the D3.version you use.

USING THE HOUSING

Whenever changing ports or O-rings, it is highly advisable to perform a simple seal test without the camera inside. Strapping a weight to the housing and lowering the unit to a depth of 30 to 50 feet of water for at least 10 minutes will assure you that the seating of the new port or o-ring is proper. This test, though time consuming and often considered unnecessary, may save your camera equipment from irreparable water damage.The housing is now ready for the dive.

CAUTION: Never jump into the water with the housing. It is best to have the system handed to you after you have made your entry, or have it lowered to you on a rope. Make certain that ropes of other equipment stay clear of the system.

When photographing, be sure to respect the environment. Avoid damaging marine life or manipulating sea creatures to obtain a pleasing photo. The housing is slightly negatively buoyant so that you can lay it down on the bottom, but avoid laying it on living coral or other delicate marine life.

Changing the memory card

Always take care to thoroughly dry the housing before opening it to change memory card. Wipe the housing off with a dry towel. If possible it is suggested that the housing be blown dried by directing an air nozzle around the main o-ring before opening.

Rest the housing on its front with the lens facing down, be carefull to protect the port surface, release the top latch first then the two side latches simultaneously. Lift the rear part of the housing and place it in a secure location. This minimizes the possibility of any residual water falling into the housing and on to the camera when the housing is opened or damage to the sealing surface.

TRANSPORTING THE AQUATICA Pro Digital housing

Store the AQUATICA Pro Digital housing in a sturdy, shock proof container. When travelling by air, remove or loosen the port. This allows for equalization of the air pressure inside the housing to the external air pressure. Failure to do so may cause serious damage to the acrylic ports. Avoid travelling with the camera mounted in the housing. If you must do so, remove the lens as external pressure can damage the camera.

CARE AND MAINTENANCE

Of the housing:

After each and every salt water dive, your housing system should be soaked or rinsed in fresh water. The housing system should soak in fresh water for at least 30 minutes. During this soaking period reach into the water and operate all the controls several times.

Be sure to remove the housing's main o-ring and clean it after every use. Refer to Maintenance: Of the O-rings. To ensure that the hand grips won't fuse on to the housing due to the exposure to salt water, it is also a good practice to occasionally remove the hand grips. Clean and lubricate the bolts with a small amount of WD-40.

WARNING: Use WD-40 carefully, sparingly and only on metal to metal surfaces. WD-40 can damage the acrylic on the ports, the optical surfaces on lens as well as the O-rings.

Of the Ports:

Care should be taken with the Dome Port and Macro Port to avoid scratches on the lens surface. The acrylic port is softer than glass so minor exterior scratches are often unavoidable. However, since the indices of refraction for acrylic and water are almost equal the scratches will not seriously impair image quality. Internal scratches(air side) must be avoided as they do not fill in with water and will affect the quality of the image.

Clean the dome using only products recommended for cleaning acrylic and a soft lint free cloth. Dust on the interior surfaces of the port can be removed with a soft camel hair brush or a blower brush. Caution must be taken when using aerosol devices as not to spray the lens material with the liquid propellant as this may seriously affect the optical properties of the port. Use of pressurize air from a dive tank is not recommended, the force of the air stream may easily dislodge a port or O-ring, It is advisable that ports should be removed and serviced after avery dive.

Of the Latches:

The three latches of the *AQUATICA Pro Digital* are designed to have a locking action to prevent accidental opening.Always ensure that the locking mechanism is secure. Watch for the build-up of corrosion or salt residue around the latches. This will appear as a white material. Lubricate the latches with a small amount of WD-40 to remove the corrosion or salt residue build-up.

Of the O-Rings:

The O-rings that need to be maintained on a regular basis are the main housing O-ring and the O-ring on the lens port The main O-ring should be cleaned on a daily basis and the port O-ring should be cleaned daily or each time the port is changed.

Of the sacrificial anodes:

The two anodes attached to the bottom parts of the housing are there to prevent corrosion due to electrolysis, as time goes they will deteriorates and need replacement, contact your dealer for replacement (parts # 19220).

TO SERVICE O-RINGS ON THE HOUSING MAIN O-RING, PORTS AND EXTENSION RINGS

1. Remove the O-ring. It is important never to use a sharp instrument when removing an O-ring as this may damage the O-ring groove or the O-ring itself. A bobby pin or edge of a credit card works well.

2. Once the O-ring is removed, it should be examined for damage. Check to make sure that the O-ring is free of nicks and cuts and that it retains its original round profile. O-rings that appear to be damaged should be discarded immediately and replaced with new O-rings.

3. Rinse the O-ring with fresh water and dry it with a clean lint free cloth.

4. Clean the O-ring groove (where the O-ring sits) with a Q-tip. Be sure to remove any lint the Q-tip may leave behind. Inspect the groove for damage.
5. Wipe the part of the housing that the O-ring seals against with a clean lint-free cloth.

6. Re-grease the O-ring with a thin layer of O-ring grease until it appears to be smooth and shiny. Do not over grease it. Use just enough grease so the O-ring will pull smoothly through your fingers. Excessive amounts of grease will only serve to attract dirt to the o-ring.

7. Make sure that the O-ring is properly (envenly) installed in the O-ring groove.

8. To reinstall the clean and lubricated O-ring, place the entire O-ring over the groove and start by pushing theO-ring in at each corner then, push the O-ring at each side and finally, work in the rest of the O-ring. Never start at one end and work your way around the O-ring. This places uneven tension on the O-ring which may cause the O-ring to stretch resulting in excess O-ring, which will have no place to go.

There are internal O-rings on the housing controls as well. These O-rings are not as susceptible to damage as they are not exposed but they do require yearly maintenance and are not user serviceable. The housing should be returned to AQUATICA or to an authorized AQUATICA service facility for this annual maintenance. always contact Aquatica or its authorized service center for a return authorization number prior to shipping any product for service.
Check the Web site **www.aquatica.ca** for the closest service center.

An internal moisture alarm is installed in your AQUATICA Pro Digital housing (Product # 20023). This moisture alarm is powered by an easily replaced CR 2032 battery.

Aquatica AD3s
For Nikon D3/D3x & D3s

AQUATICA™ Digital

System Chart

Made in CANADA

Replacement Viewfinder
19218 INCLUDED

Aqua View 45° Finder
20059

Aqua View Finder
20054

Protective Hard Case
19216

19304

BULKHEAD SELECTION *
20067 20067-KT 20067-KM

Moisture Alarm
20023
INCLUDED

Hydrophone
19221

Nikon Type 3 Lens Chart

18823
Maintenance O-ring Kit

Rebuilt O-Ring Kit
18837

Sacrificial Anodes
19220

Deep Rated spring Kit
19217

PORT EXTENSION RINGS
18456 18463 18453 18462 18457 18458

18469
Extension to Port locking collar

18409
6" Dome Port
INCLUDED
18502
6" Neoprene Dome Cover

18484
6" Dome Shade

18504
6" Neoprene cover for dome shade

18405
8" Dome Port
INCLUDED
18500
8" Neoprene Dome Cover

18480
8" Dome Shade

18503
8" Neoprene cover for dome shade

18407
9.25" Mega Dome
INCLUDED
18506
Neoprene Cover

18410
4" Mini Dome 100
INCLUDED
18508
Neoprene Cover

Nikon Type 3 Lens Chart

18426
AF/MF Macro Port
INCLUDED
18505
Neoprene Cover

18428
AF Macro Port
INCLUDED
18505
Neoprene Cover

19351 Close up lens holder

19352
+5
Close Up lens

19353
+10
Close Up lens

19350
Close Up Kit
Includes: holder, +5 & +10 close up lenses

* Bulkhead connections

20067 Double Nikonos connectors
20067-KT One Ikelite 5 pins connector
20067-KM One Ikelite 2 pins connector

(to know more about connectors refer to our website at www.aquatica.ca)

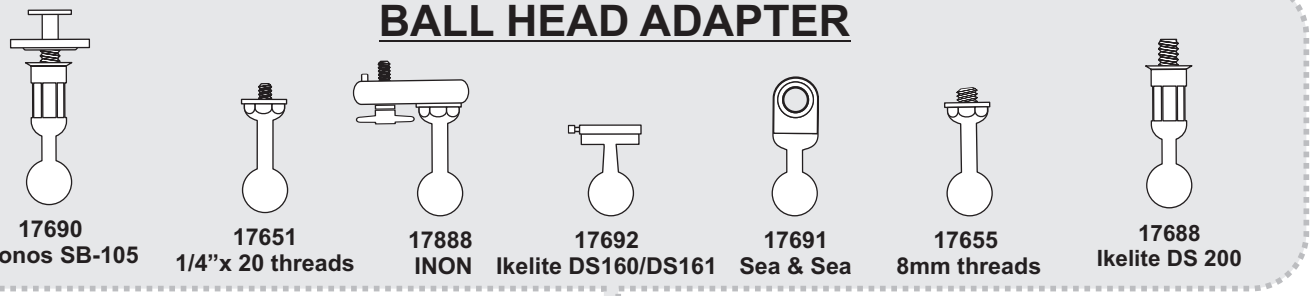
www.aquatica.ca

Technical Lighting Control

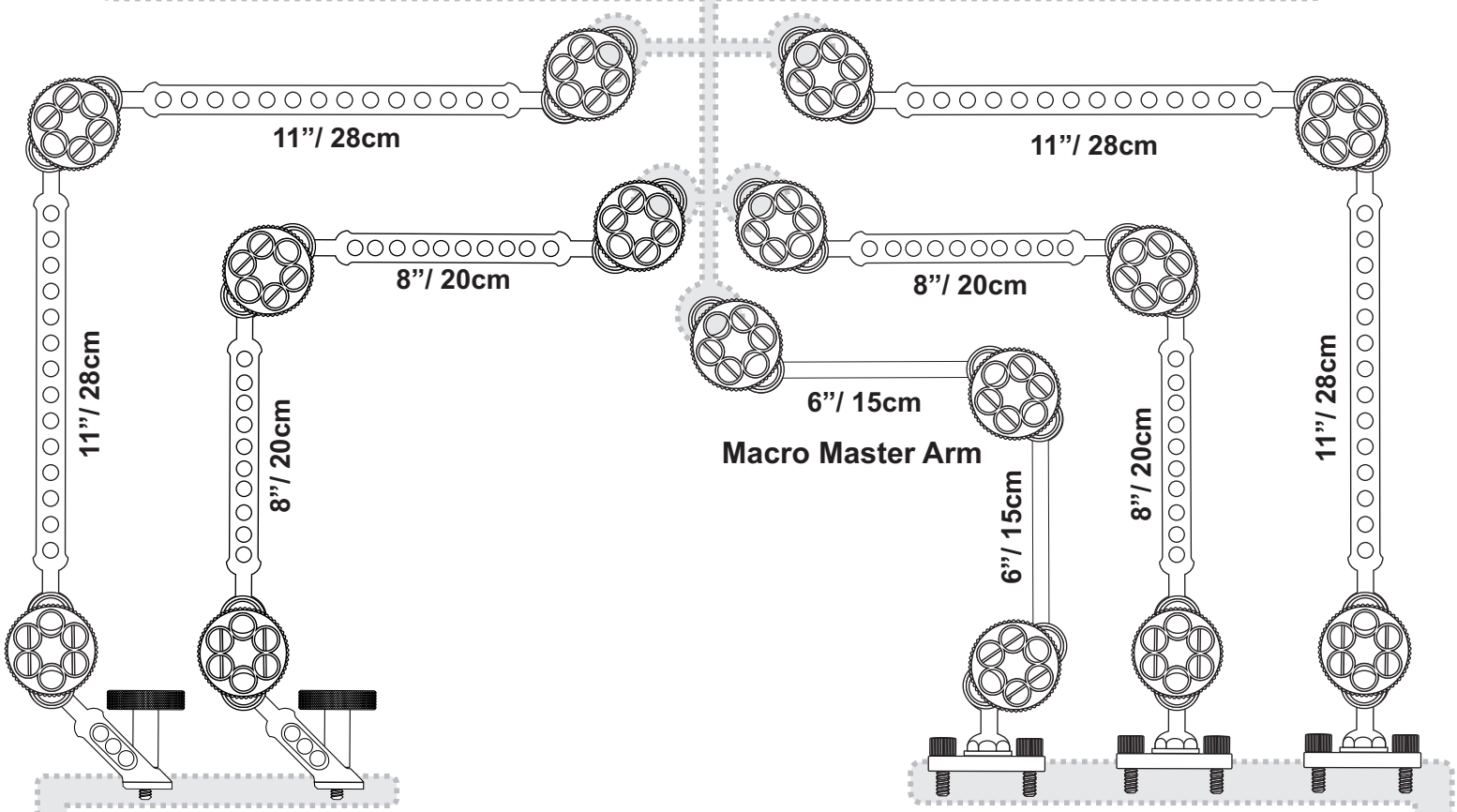
ARM SETS WITH BALL HEAD ADAPTER CHART

A Division of: AQUATICA Digital

BALL HEAD ADAPTER



17690 Nikonos SB-105 | 17651 1/4"x 20 threads | 17888 INON | 17692 Ikelite DS160/DS161 | 17691 Sea & Sea | 17655 8mm threads | 17688 Ikelite DS 200



17512 17511

17519 17514 17515

17550
Dove tail bracket with 1/4"x 20 screws
For Aquatica housings

17552
Dove tail bracket with 5mm screws
For Sea & Sea, Subal, Secam and other popular metric system housings

For Aquatica housing
Supplied with two 1/4"-20 cap screws and 3/16" hexagonal key wrench

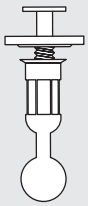
www.aquatica.ca

No pins, no O-rings just tough, reliable performance from TLC

Technical Lighting Control

INDIVIDUAL COMPONENTS CHART

BALL HEAD ADAPTER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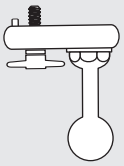
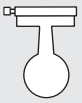
Nikonos SB-105

17651
1/4”x 20 threads


17888
INON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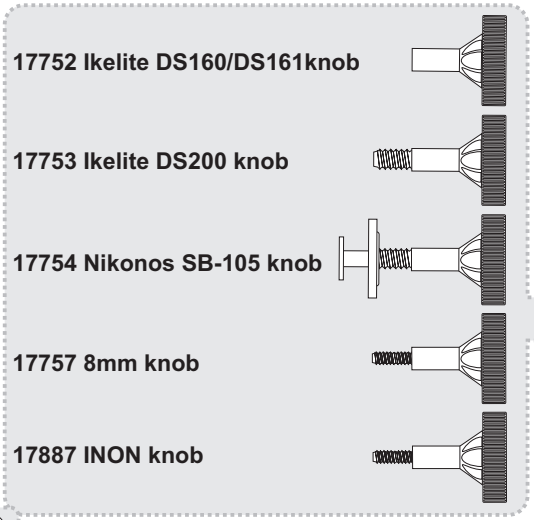
Ikelite DS160/DS161

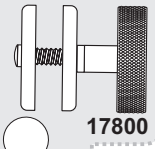
17691
Sea & Sea

17655
8mm threads

17688
Ikelite DS 200



A Division of:
AQUATICA™
Digital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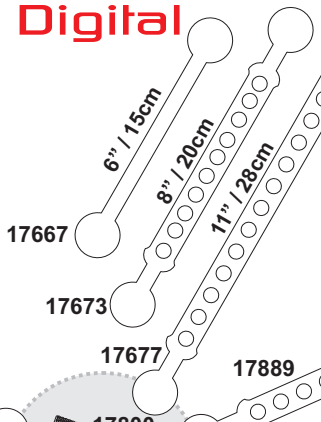

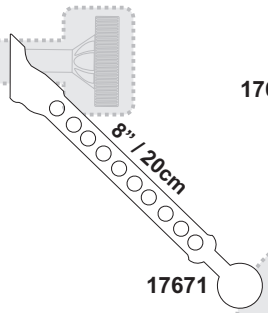

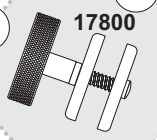
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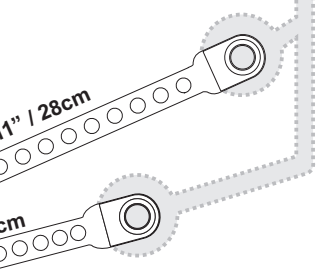

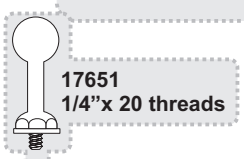
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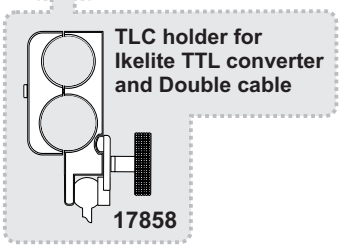

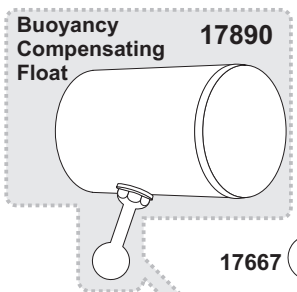

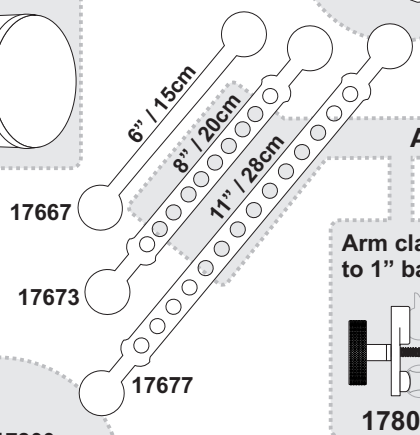

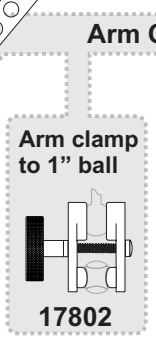

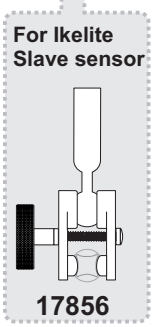

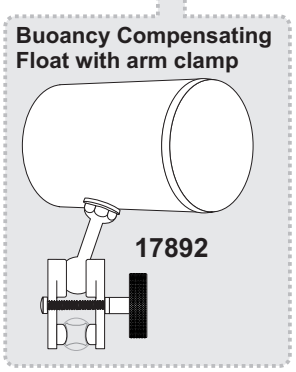

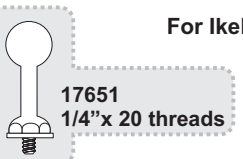
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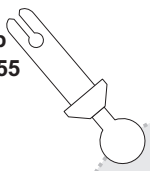
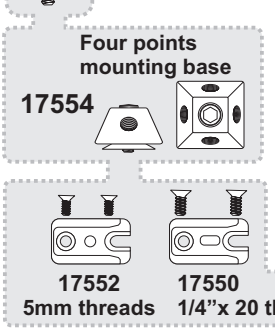
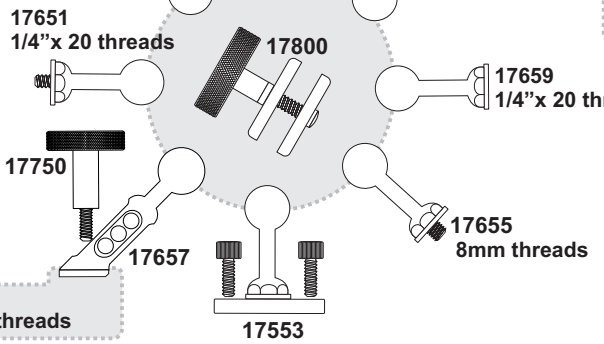
1/4”x 20 threads







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No pins, no O-rings just tough, reliable performance from TLC

AQUATICA™
Digital

WARRANTY

PLEASE READ CAREFULLY

One year Limited Warranty.

Thank you for purchasing an AQUATICA manufactured product! Your AQUATICA housing is handcrafted by a small group of specially trained individuals - each of whom takes the most pride and satisfaction in offering you the best underwater camera housings in the world. All AQUATICA products are guaranteed against defects in material or workmanship for (1) one full year from the date of purchase for consumer use. these same products when used commercially will carry a 90-day warranty. No statutory warranty applies. Camera housed in AQUATICA housings are not covered under this warranty and ANY WATER DAMAGE SUSTAINED DUE TO INSTALLATION ERROR OR ANY OTHER REASON IS NOT THE RESPONSABILLITY OF AQUATICA. Therefore the appropriate insurance should be maintained by the user.

Warranty does not apply to replaceable seals or damages to impacts or abrasive surfaces. Warranty applies only to products purchased from authorized AQUATICA dealers and does not extend beyond the original retail purchaser. Unauthorized modifications or repairs will automatically void this warranty. this applies to removal of serial numbers and AQUATICA identification labels.

To obtain service during or after the warranty period you must notify AQUATICA at 514-737-9481
and ship BY REGISTERED MAIL (INSURED) ONLY, enclosing your proof of purchase to:

AQUATICA
3025 De Baene
Montreal (Quebec)
H4S 1K8

Mark clearly on your package “Canadian goods returned for repair”

Do not ship by any other means.
Unauthorized packages will be refused.

YOUR SERIAL NUMBER_____